

TOSHIBA

INSTRUCTION MANUAL

MICRO CAMERA HEAD

IK-C44H

INFORMATION

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

USER-INSTALLER CAUTION: Your authority to operate this FCC verified equipment could be voided if you make changes or modifications not expressly approved by the party responsible for compliance to Part 15 of the FCC rules.

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

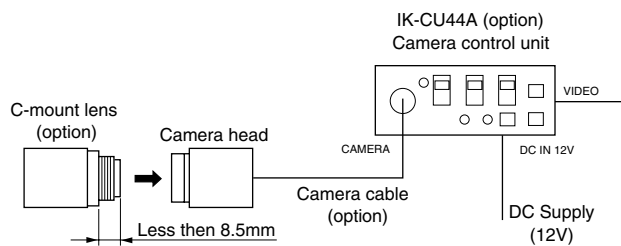
CAUTIONS ON USE

- Please use this apparatus by connecting only with camera control unit IK-CU44A.
- Read the "CAUTIONS ON USE AND INSTALLATION" in the instruction manual of IK-CU44A, and follow them.

COMPONENTS

- (1) Camera head (without lens) 1
- (2) Accessories
 - (a) Instruction manual 1

CONNECTION



- When connecting or disconnecting the camera cables (for the camera head and camera control unit), always turn off the power switch of the camera control unit first. If not, the camera head may be damaged.
- Use a C-mount lens with the protruded section from the mount base less than 8.5 mm.

LIMITED WARRANTY TOSHIBA CCD CAMERA

Promptly register your product with Toshiba on-line at www.toshiba.com/taisid. By registering your product you will be eligible for periodic updates, announcements, and special offers. You will have access to extended warranty options, upgrades (as applicable), useful tips, on-line troubleshooting, and the ability to schedule service on-line if necessary. The Imaging Systems Division of Toshiba America Information Systems, Inc. ("ISD") makes the following limited warranties extend to the Original End-User ("Your[r]").

Limited One (1) Year Warranty of Labor and Parts

ISD warrants this product and parts against defects in material or workmanship for a period of one year from the date of original retail purchase by the end-user. During this period, ISD will repair or replace a defective product or part with a new or refurbished item. The user must deliver the entire product to an ISD authorized service center. The user is responsible for all transportation and insurance charges for the product to the Service Center. ISD reserves the right to substitute Factory Refurbished Parts and / or Factory Refurbished Product in place of those in need of repair.

Step-by-step Procedures - How to Obtain Warranty Service

- [1] Verify operation of the unit by checking the instruction manual
- [2] If there is a defect in material or workmanship, contact an Authorized Service Provider within 30 days after the product fails to comply with specifications.
- [3] Arrange for delivery of the product to the ISD authorized service center. Products must be insured and securely packed, preferably in the original shipping carton. A letter explaining the defect and a copy of the bill of sale or other proof of purchase must be enclosed with a complete return street address and daytime telephone number. Charges for transportation and insurance must be prepaid by the end-user.

Questions? If you have any questions, please check the Toshiba Imaging Systems Division Web site as follows:

Website: <http://www.toshiba.com/taisid/indmed>

Your Responsibility, warranties are subject to the following conditions:

- [1] You must retain the bill of sale or provide other proof of purchase.
- [2] You must schedule service within thirty days after you discover a defective product or part.
- [3] All warranty servicing of this product must be made by a Toshiba ISD Authorized Service Provider.
- [4] The warranty extends to defects in material or workmanship as limited above, and not to any products or parts that have been lost or discarded by user. The warranty does not cover damage caused by misuse, accident, improper installation, improper maintenance, or use in violation of instructions furnished by ISD. The warranty does not extend to units which have been altered or modified without authorization of ISD, or to damage to products or parts thereof which have had the serial number removed, altered defaced or rendered illegible.

ALL WARRANTIES IMPLIED BY STATE LAW, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSLY LIMITED TO THE DURATION OF THE LIMITED WARRANTIES SET FORTH ABOVE. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply. WITH THE EXCEPTION OF ANY WARRANTIES IMPLIED BY STATE LAW AS HEREBY LIMITED, THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WITH RESPECT TO THE REPAIR OR REPLACEMENT OF ANY PRODUCTS OR PARTS. IN NO EVENT SHALL ISD BE LIABLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES. Some states do not allow the exclusion or limitation of incidental or consequential damages so the above limitation may not apply.

No person, agent, distributor, dealer, service station or company is authorized to change, modify or extend the terms of these warranties in any manner whatsoever. The time within which an action must be commenced to enforce any obligation of ISD arising under this warranty or under any statute, or law of the United States or any state thereof, is hereby limited to one year from the date you discover or should have discovered, the defect. This limitation does not apply to implied warranties arising under state law. Some states do not permit limitation of the time within which you may bring an action beyond the limits provided by state law so the above provision may not apply to user. This warranty gives the user specific legal rights, and user may also have other rights, which may vary from state to state.

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Imaging Systems Division
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SPECIFICATIONS

Image sensor	1/2 inch IT-CCD
Effective pixels	Horizontal: 768 pixels, Vertical: 494 pixels
Effective image area	Horizontal: 6.54 mm, Vertical: 4.89 mm
Resolution	Horizontal: More than 470 lines, Vertical: More than 350 lines
Standard intensity of illumination for objects	20 lx (F1.2, 3000K)
Minimum intensity of illumination for objects	1.5 lx (F1.2, 3000K)
S/N ratio	46 dB or more
Lens mount	C-Mount
Weight	2.8 oz (78g)

- Design and specifications are subject to change without notice.

OPTIONAL PARTS

For further details, contact your camera dealer.

Camera control unit

Type name
IK-CU44A

Camera cable

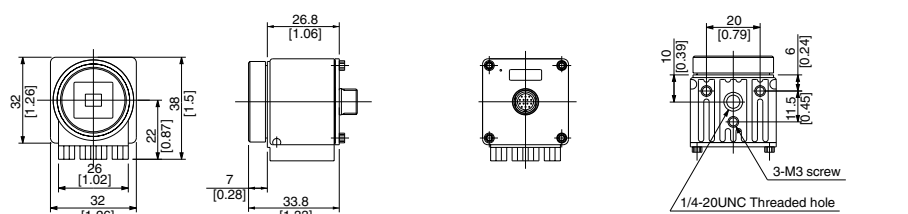
Type name	Nominal length m	Diameter mm
EXC-4302	2	5.0
EXC-4303	3	5.0
EXC-4305	5	5.0
EXC-4312	12	5.0
EXC-4320	20	5.0
EXC-4330	30	5.0

IRIS extension cable

Type name	Nominal length m	Diameter mm
EXC-C2E	2	5.0
EXC-C5E	5	5.0
EXC-C10E	10	5.0
EXC-C15E	15	5.0
EXC-C20E	20	5.0
EXC-C30E	30	5.0

EXTERIOR DIMENSIONS

Camera Head



DISCLAIMER

We disclaim any responsibility and shall be held harmless for any damages or losses incurred by the user in any of the following cases:

1. Fire, earthquake or any other act of God; acts by third parties; misuse by the user, whether intentional or accidental; use under extreme operating conditions.
2. Malfunction or non-function resulting in indirect, additional or consequential damages, including but not limited to loss of expected income and suspension of business activities.
3. Incorrect use not in compliance with instructions in this instruction manual.
4. Malfunctions resulting from misconnection to other equipment.
5. Repairs or modifications made by the user or caused to be made by the user and carried out by an unauthorized third party.
6. Notwithstanding the foregoing, Toshiba's liabilities shall not, in any circumstances, exceed the purchase price of the product.

COPYRIGHT AND RIGHT OF PORTRAIT

There may be a conflict with the Copyright Law and other laws when a customer uses, displays, distributes, or exhibits an image picked up by a television camera without permission from the copyright holder. Please also note that transfer of an image or file covered by copyright is restricted to use within the scope permitted by the Copyright Law.

CAUTIONS ON USE AND INSTALLATION

- **Carefully handle the units.**
Do not drop, or give a strong shock or vibration to the camera. This may cause problems. Treat the camera cables carefully to prevent cable problems, such as cable breakdown and loosened connections.
- **Do not shoot intense light.**
If there is an intense light at a location on the screen such as a spot light, a blooming and smearing may occur. When intense light enters, vertical stripes may appear on the screen. This is not a malfunction. Ghosts may occur when there is an intense light near the object. In this case, change the shooting angle.
- **Install the camera in a location free from noise.**
If the camera or the cables are located near power utility lines or a TV, etc. undesirable noise may appear on the screen. In such a case, try to change the location of the camera or the cable wiring.
- **Moire**
When thin stripe patterns are shot, stripe patterns that are not actually there (moire) may appear as interference stripes. This is not a malfunction.
- **Operating ambient temperature and humidity.**
Do not use the camera in places where temperature and humidity exceed the specifications. Picture quality will lower and internal parts may be damaged.
Be particularly careful when using in places exposed to direct sunlight. When shooting in hot places, depending on the conditions of the object and the camera (for example when the gain is increased), noise in the form of vertical strips or white dots may occur. This is not a malfunction.
- **Handling of the protection cap.**
Keep the protection cap away from children. Children may put them into mouth or swallow them accidentally. The protection cap protects the image sensing plane when the lens is removed from the camera, do not throw away.
- **When not using the camera for a longtime.**
Stop supplying power.
- **When cleaning the camera**
Always turn off the power and clean with a piece of soft dry cloth. Do not use benzine, alcohol, thinner, household detergents, chemically treated cloths, etc. If used, coating and printed letters may be discolored. When cleaning the lens, use a lens cleaning paper, etc.
- **Avoid using or storing the camera in the following places:**
Places filled with highly flammable gas.
Places near gasoline, benzene, or paint thinner.
Places subject to strong vibration.
Places contacting chemicals (such as pesticides), rubber or vinyl products for a long period of time.